

University of Minnesota
Agricultural Extension Service
Folder 259

SOME IMPORTANT INSECT LARVAE AFFECTING CORN

COMMON STALK BORER, *Papaipema nebris* (Guenee). The common stalk borer is a general feeder and will attack almost any kind of plant with a soft stem large enough to accommodate its body. In corn, the damage is usually confined to field margins where the borers have moved in from weedy areas. The insect not only bores into the stalks, but also feeds in the whorls of young corn, giving the plants a "chewed-up" and ragged appearance.

CORN EARWORM, *Heliothis zea* (Boddie). The corn earworm may occur throughout the state, but greatest damage is caused in southern Minnesota. Besides corn, it feeds on soybeans and other plants and is also known as the tobacco budworm, cotton bollworm, tomato fruitworm, and vetchworm. The insect varies greatly in color: worms found in Minnesota are tan, brownish, or green. There are several generations each year. Control is difficult and expensive; therefore, treatment of field corn is seldom practiced.

ARMYWORM, *Pseudaletia unipuncta* (Haworth). The armyworm feeds primarily on plants of the grass family. Outbreaks occur only in certain years and in areas favorable to their development. Eggs are laid in dense, grassy vegetation as in pastures, small grain fields, and along roadsides. As the worm matures, it leaves these areas and "marches" in search of food. Corn is usually damaged during these migrations. Later generations are held in check by disease, insect parasites, and other natural enemies.

WHITE GRUB, *Phyllophaga* spp. White grubs are the larvae of May beetles or "June bugs." Our common species have 3-year life cycles. Damage is usually most severe in corn following sod. Injury often appears as dead and dying plants in fairly large areas in the field.

SEED CORN MAGGOTS, *Hylemya platura* (Meigen). During cool, wet springs these maggots may severely reduce corn stands by destroying the seed. The whitish, legless maggots may be found tunneling in the seeds. The adults are small, grayish brown flies.

WIREWORM (Various species). These hardshelled larvae of "click" beetles often damage corn severely by feeding on the seed, roots, and underground parts of the stem or stalk. Early damage to seed usually appears as a poor stand. Infestations are most severe when corn follows sod or meadow in the rotation. Most species have life cycles which take 3 to 5 years to complete.

CORN ROOTWORM feeding on corn roots causes lodging or "goosenecking" of the stalks. Severe feeding also reduces the ability of the roots to furnish the plant with water and nutrients. This results in stunting, reduced yields, and sometimes death of the plant. Damage occurs to corn grown in fields which were in corn the previous year.

EUROPEAN CORN BORER, *Ostrinia nubilalis* (Hubner). Corn borer moths emerge in spring and lay eggs on early-planted corn. Newly hatched larvae feed on leaves as they crawl toward the stalk. Many larvae congregate in the plant whorl and later crawl behind leaf sheaths and bore into the stalk. When mature, these borers change into egg-laying moths for a second generation. Most of these eggs are laid on late-planted corn and the emerging borers feed in the ears as well as bore into the stalks. Proper timing of insecticide treatments is important. Application must be made after eggs hatch, but before young borers become deeply imbedded in the plant whorl or enter the stalk.

BLACK CUTWORM, *Agrotis ypsilon* (Rott.). The black cutworm is one of the most destructive species of cutworms attacking corn. Plants are cut off at or below ground. Older plants may be stunted or killed by the cutworms tunneling into the base of the stalk. In dry weather these worms may be feeding underground so that control becomes very difficult with postemergence sprays.

CORN ROOT WEBWORM (and other sod webworms) may damage corn planted on sod land. Worms feed on leaves and stems of young corn and construct webbed tubes in the soil next to the plants.

For colored illustrations of insect pests of corn, see Extension Folders 236 and 237.

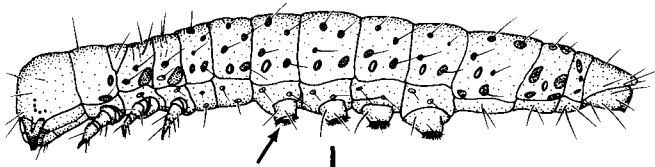


Pictorial Key to Some Important Insect Larvae Affecting Corn

Norman T. Baker and Ronald A. Hellenthal

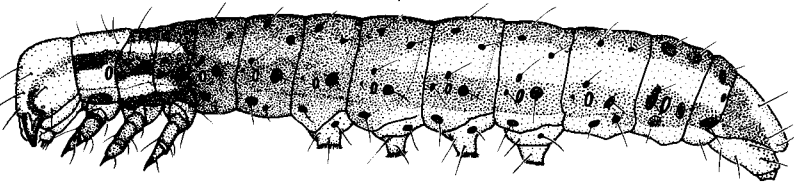
Department of Entomology, Fisheries, and Wildlife Agricultural Extension Service University of Minnesota

ABDOMINAL LEGS PRESENT



HEAD WITH DARK LATERAL STRIPE,
ANTERIOR HALF OF BODY USUALLY
WITH DARK SADDLE

HEAD WITHOUT DARK
LATERAL STRIPE, ANTERIOR HALF
OF BODY WITHOUT DARK SADDLE



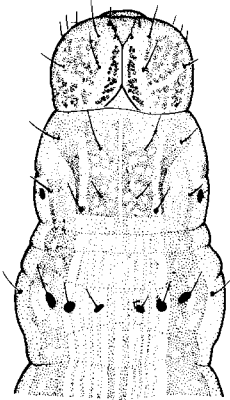
Common Stalk Borer
Papaipema nebris

BODY WITH DISTINCT LATERAL STRIPE

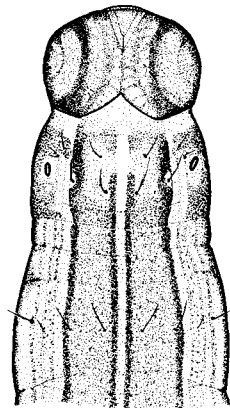
BODY WITHOUT DISTINCT
LATERAL STRIPE

DORSAL BODY SURFACE WITH
LIGHT STRIPES PREDOMINATING

DORSAL BODY SURFACE WITH
DARK STRIPES PREDOMINATING

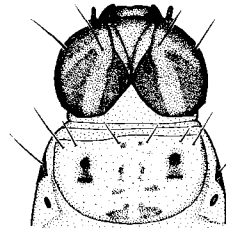


Corn Earworm
Heliothis zea



Armyworm
Pseudaletia unipuncta

HEAD CAPSULE
UNIFORMLY DARK BROWN

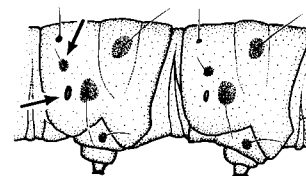


European Corn Borer
Ostrinia nubilalis

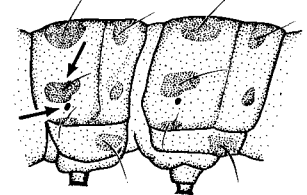
HEAD CAPSULE NOT UNIFORMLY DARK BROWN

SPIRACLES ABOUT SAME SIZE
AS ADJACENT UPPER PLATE

SPIRACLES LESS THAN 1/10 AS
LARGE AS ADJACENT UPPER PLATE

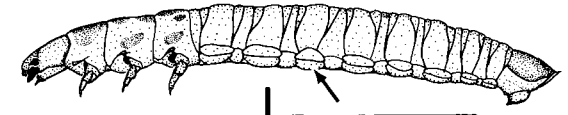


Black Cutworm
Agrotis ipsilon



Corn Root Webworm
Crambus caliginosellus

ABDOMINAL LEGS ABSENT



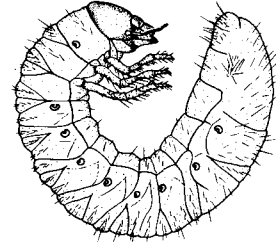
Seed Corn Maggot
Hylemya platura

THORACIC LEGS PRESENT

THORACIC LEGS ABSENT

BODY "U" SHAPED

BODY LINEAR

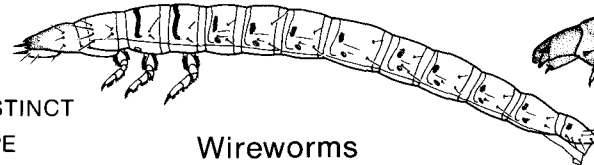


White Grub
Phyllophaga spp.



ABDOMINAL SEGMENTS NOT SUBDIVIDED

ABDOMINAL SEGMENTS SUBDIVIDED



Wireworms
Elaeteridae



Corn Rootworms
Diabrotica spp.